

CLAIMS

What is claimed is:

- 5 1. A communication system comprising:
 one or more gateways coupled to a terrestrial network;
 one or more subscriber terminals that are to be coupled to the terrestrial network;
 and
 a communication satellite providing forward and return communication links
 between the one or more gateways and the one or more subscriber terminals that each
 comprise a switching network that selectively couples signals between selected gateways
 and selected subscriber terminals using predetermined beams.
2. The communication system recited in Claim 1 wherein the terrestrial network
 comprises the Internet.
3. The communication system recited in Claim 1 wherein the forward
 communication link implemented in the communication satellite comprises:
 a plurality of first switches that receive data transmitted from a respective
 plurality of gateways;
 one or more forward channel gateway multiplexers selectively coupled to one of
 the plurality of first switches;
 a plurality of second switches selectively coupled to outputs of the plurality of
 first switches and selectively coupled to outputs of the one or more forward channel
 gateway multiplexers; and
 one or more regional multiplexers selectively coupled to the plurality of second
 switches that output data to a plurality of regions servicing the one or more subscriber
 terminals.
4. The communication system recited in Claim 1 wherein selected ones of the
 pluralities of first and second switches comprise power dividing hybrids.
5. The communication system recited in Claim 1 wherein the forward
 communication link implemented in the communication satellite comprises:
 a first switch for receiving data transmitted from a first gateway;
 a third switch for receiving data transmitted from a second gateway;
 a forward channel gateway multiplexer coupled to the first switch;

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a fourth switch coupled to the third switch that outputs data to a second gateway.

9. The communication system recited in Claim 1 wherein each communication link implemented in the communication satellite comprises:

one or more first switches that communicate with corresponding gateways;

one or more gateway multiplexers coupled to the one or more first switches;

one or more second switches selectively coupled to the one or more gateway multiplexers and selectively coupled to the one or more first switches; and

one or more regional multiplexers coupled to the one or more second switches that that communicate with plurality of regions.

10. The communication system recited in Claim 9 wherein selected ones of the first and second switches comprise power dividing hybrids.

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